

# Shuxiang Guo

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

346  
papers

3,322  
citations

27  
h-index

40  
g-index

505  
ext. papers

5,492  
ext. citations

3  
avg, IF

5.86  
L-index

#	Paper	IF	Citations
346	A new type of fish-like underwater microrobot. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2003</b> , 8, 136-144	4.5	246
345	Development of a Spherical Underwater Robot Equipped with Multiple Vectored Water-Jet-Based Thrusters. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , <b>2012</b> , 67, 307-321	2.9	77
344	. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2016</b> , 21, 1043-1054	5.5	65
343	A Kinect-based real-time compressive tracking prototype system for amphibious spherical robots. <i>Sensors</i> , <b>2015</b> , 15, 8232-52	3.8	59
342	Design and experimental evaluation of a teleoperated haptic robot-assisted catheter operating system. <i>Journal of Intelligent Material Systems and Structures</i> , <b>2016</b> , 27, 3-16	2.3	55
341	Development of an Amphibious Turtle-Inspired Spherical Mother Robot. <i>Journal of Bionic Engineering</i> , <b>2013</b> , 10, 446-455	2.7	51
340	Design and performance evaluation of an amphibious spherical robot. <i>Robotics and Autonomous Systems</i> , <b>2015</b> , 64, 21-34	3.5	49
339	A biomimetic underwater microrobot with multifunctional locomotion. <i>Robotics and Autonomous Systems</i> , <b>2012</b> , 60, 1472-1483	3.5	47
338	Comparison of sEMG-Based Feature Extraction and Motion Classification Methods for Upper-Limb Movement. <i>Sensors</i> , <b>2015</b> , 15, 9022-38	3.8	45
337	A Novel Robot-Assisted Endovascular Catheterization System With Haptic Force Feedback. <i>IEEE Transactions on Robotics</i> , <b>2019</b> , 35, 685-696	6.5	41
336	Design and characteristics evaluation of a novel spherical underwater robot. <i>Robotics and Autonomous Systems</i> , <b>2017</b> , 94, 61-74	3.5	40
335	A cooperation of catheters and guidewires-based novel remote-controlled vascular interventional robot. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 20	3.7	40
334	Design of a novel telerehabilitation system with a force-sensing mechanism. <i>Sensors</i> , <b>2015</b> , 15, 11511-27	3.8	39
333	Operation evaluation in-human of a novel remote-controlled vascular interventional robot. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 34	3.7	36
332	Design and characteristics evaluation of a novel teleoperated robotic catheterization system with force feedback for vascular interventional surgery. <i>Biomedical Microdevices</i> , <b>2016</b> , 18, 76	3.7	36
331	Modeling and experimental evaluation of an improved amphibious robot with compact structure. <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2018</b> , 51, 37-52	9.2	36
330	Performance evaluation of a strain-gauge force sensor for a haptic robot-assisted catheter operating system. <i>Microsystem Technologies</i> , <b>2017</b> , 23, 5041-5050	1.7	35

329	Design and performance evaluation of collision protection-based safety operation for a haptic robot-assisted catheter operating system. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 22	3.7	32
328	Hybrid Locomotion Evaluation for a Novel Amphibious Spherical Robot. <i>Applied Sciences (Switzerland)</i> , <b>2018</b> , 8, 156	2.6	32
327	Muscle Strength Assessment System Using sEMG-Based Force Prediction Method for Wrist Joint. <i>Journal of Medical and Biological Engineering</i> , <b>2016</b> , 36, 121-131	2.2	30
326	Vascular elasticity determined mass-spring model for virtual reality simulators. <i>International Journal of Mechatronics and Automation</i> , <b>2015</b> , 5, 1	0.2	30
325	A roller-skating/walking mode-based amphibious robot. <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2017</b> , 44, 17-29	9.2	29
324	A virtual-reality simulator and force sensation combined catheter operation training system and its preliminary evaluation. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , <b>2017</b> , 13, e1769	2.9	29
323	A novel hybrid microrobot using rotational magnetic field for medical applications. <i>Biomedical Microdevices</i> , <b>2015</b> , 17, 31	3.7	28
322	Operating force information on-line acquisition of a novel slave manipulator for vascular interventional surgery. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 33	3.7	28
321	Preliminary concept of a novel spherical underwater robot. <i>International Journal of Mechatronics and Automation</i> , <b>2015</b> , 5, 11	0.2	28
320	Visual Detection and Tracking System for a Spherical Amphibious Robot. <i>Sensors</i> , <b>2017</b> , 17,	3.8	27
319	Performance Evaluation of a Novel Propulsion System for the Spherical Underwater Robot (SURIII). <i>Applied Sciences (Switzerland)</i> , <b>2017</b> , 7, 1196	2.6	27
318	Development of a Lobster-Inspired Underwater Microrobot. <i>International Journal of Advanced Robotic Systems</i> , <b>2013</b> , 10, 44	1.4	27
317	Electromyography-Based Quantitative Representation Method for Upper-Limb Elbow Joint Angle in Sagittal Plane. <i>Journal of Medical and Biological Engineering</i> , <b>2015</b> , 35, 165-177	2.2	26
316	Development of an amphibious mother spherical robot used as the carrier for underwater microrobots <b>2012</b> ,		26
315	Design and performance evaluation of a haptic interface based on MR fluids for endovascular tele-surgery. <i>Microsystem Technologies</i> , <b>2018</b> , 24, 909-918	1.7	25
314	Compensatory force measurement and multimodal force feedback for remote-controlled vascular interventional robot. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 74	3.7	25
313	Mechatronic System and Experiments of a Spherical Underwater Robot: SUR-II. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , <b>2015</b> , 80, 325-340	2.9	25
312	Development of a kind of robotic catheter manipulation system <b>2011</b> ,		25

311	Hydrodynamic Analysis-Based Modeling and Experimental Verification of a New Water-Jet Thruster for an Amphibious Spherical Robot. <i>Sensors</i> , <b>2019</b> , 19,	3.8	24
310	Development of a powered variable-stiffness exoskeleton device for elbow rehabilitation. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 64	3.7	24
309	Study on real-time force feedback for a master-slave interventional surgical robotic system. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 37	3.7	23
308	Performance evaluation of a robot-assisted catheter operating system with haptic feedback. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 50	3.7	23
307	A CNN-based prototype method of unstructured surgical state perception and navigation for an endovascular surgery robot. <i>Medical and Biological Engineering and Computing</i> , <b>2019</b> , 57, 1875-1887	3.1	22
306	Robust RGB-D Camera and IMU Fusion-based Cooperative and Relative Close-range Localization for Multiple Turtle-inspired Amphibious Spherical Robots. <i>Journal of Bionic Engineering</i> , <b>2019</b> , 16, 442-454	2.7	22
305	Design and kinematic analysis of an amphibious spherical robot <b>2012</b> ,		21
304	Design and performance evaluation of a novel robotic catheter system for vascular interventional surgery. <i>Microsystem Technologies</i> , <b>2016</b> , 22, 2167-2176	1.7	21
303	A virtual reality-based method of decreasing transmission time of visual feedback for a tele-operative robotic catheter operating system. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , <b>2016</b> , 12, 32-45	2.9	21
302	Magnetorheological Fluids Actuated Haptic-Based Teleoperated Catheter Operating System. <i>Micromachines</i> , <b>2018</b> , 9,	3.3	21
301	Preliminary mechanical analysis of an improved amphibious spherical father robot. <i>Microsystem Technologies</i> , <b>2016</b> , 22, 2051-2066	1.7	20
300	Study of the Operational Safety of a Vascular Interventional Surgical Robotic System. <i>Micromachines</i> , <b>2018</b> , 9,	3.3	20
299	Evaluating performance of a novel developed robotic catheter manipulating system. <i>Journal of Micro-Bio Robotics</i> , <b>2013</b> , 8, 133-143	1.4	20
298	Characteristic Evaluation of a Shrouded Propeller Mechanism for a Magnetic Actuated Microrobot. <i>Micromachines</i> , <b>2015</b> , 6, 1272-1288	3.3	20
297	ANSYS FLUENT-based modeling and hydrodynamic analysis for a spherical underwater robot <b>2013</b> ,		19
296	3D Modelling of a Vectored Water Jet-Based Multi-Propeller Propulsion System for a Spherical Underwater Robot. <i>International Journal of Advanced Robotic Systems</i> , <b>2013</b> , 10, 80	1.4	19
295	Realization of a Catheter Driving Mechanism with Micro tactile sensor for Intravascular Neurosurgery <b>2006</b> ,		19
294	Development and Evaluation of Novel Magnetic Actuated Microrobot with Spiral Motion Using Electromagnetic Actuation System. <i>Journal of Medical and Biological Engineering</i> , <b>2016</b> , 36, 506-514	2.2	18

293	Design and performance evaluation of a biomimetic microrobot for the father-son underwater intervention robotic system. <i>Microsystem Technologies</i> , <b>2016</b> , 22, 831-840	1.7	18
292	Development of Multiple Capsule Robots in Pipe. <i>Micromachines</i> , <b>2018</b> , 9,	3.3	18
291	Underwater motion characteristics evaluation of multi amphibious spherical robots. <i>Microsystem Technologies</i> , <b>2019</b> , 25, 499-508	1.7	18
290	A novel multifunctional underwater microrobot <b>2010</b> ,		18
289	Performance Evaluation of a Magnetically Actuated Capsule Microrobotic System for Medical Applications. <i>Micromachines</i> , <b>2018</b> , 9,	3.3	18
288	Design and evaluation of a novel guidewire navigation robot <b>2016</b> ,		17
287	Development of a Novel Robotic Catheter Manipulating System with Fuzzy PID Control. <i>International Journal of Intelligent Mechatronics and Robotics</i> , <b>2012</b> , 2, 58-77		17
286	Analysis and improvement of the water-jet propulsion system of a spherical underwater robot <b>2012</b> ,		17
285	IPMC actuator-based an underwater microrobot with 8 legs <b>2008</b> ,		17
284	A vascular interventional surgical robot based on surgeon's operating skills. <i>Medical and Biological Engineering and Computing</i> , <b>2019</b> , 57, 1999-2010	3.1	16
283	Modal and fatigue analysis of critical components of an amphibious spherical robot. <i>Microsystem Technologies</i> , <b>2017</b> , 23, 2233-2247	1.7	15
282	Design and evaluation of safety operation VR training system for robotic catheter surgery. <i>Medical and Biological Engineering and Computing</i> , <b>2018</b> , 56, 25-35	3.1	14
281	A Vascular Interventional Surgical Robotic System Based on Force-Visual Feedback. <i>IEEE Sensors Journal</i> , <b>2019</b> , 19, 11081-11089	4	14
280	Preliminary concept and kinematics simulation of a novel Spherical Underwater Robot <b>2014</b> ,		14
279	Development of an Infrared Ray controlled fish-like underwater microrobot <b>2010</b> ,		13
278	Developments of two novel types of underwater crawling microrobots		13
277	A highly stable and efficient spherical underwater robot with hybrid propulsion devices. <i>Autonomous Robots</i> , <b>2020</b> , 44, 759-771	3	13
276	A novel force feedback interventional surgery robotic system <b>2015</b> ,		12

275	A novel butterfly-inspired underwater microrobot with pectoral fins <b>2011</b> ,		12
274	A wireless microrobot with two motions for medical applications <b>2012</b> ,		12
273	A Novel Step Optimal Path Planning Algorithm for the Spherical Mobile Robot Based on Fuzzy Control. <i>IEEE Access</i> , <b>2020</b> , 8, 1394-1405	3.5	12
272	Integrating Compliant Actuator and Torque Limiter Mechanism for Safe Home-Based Upper-Limb Rehabilitation Device Design. <i>Journal of Medical and Biological Engineering</i> , <b>2017</b> , 37, 357-364	2.2	11
271	A Novel tele-operation controller for wireless microrobots in-pipe with hybrid motion. <i>Robotics and Autonomous Systems</i> , <b>2016</b> , 76, 68-79	3.5	11
270	A smart actuator-based underwater microrobot with two motion attitudes <b>2012</b> ,		11
269	A novel motor function training assisted system for upper limbs rehabilitation <b>2009</b> ,		11
268	Control of the wireless microrobot with multi-DOFs locomotion for medical applications <b>2012</b> ,		11
267	Adaptive fuzzy sliding mode control for spherical underwater robots <b>2012</b> ,		11
266	Development of a biomimetic underwater microrobot for a father-son robot system. <i>Microsystem Technologies</i> , <b>2017</b> , 23, 849-861	1.7	10
265	Fuzzy PID algorithm-based motion control for the spherical amphibious robot <b>2015</b> ,		10
264	Machine learning-based operation skills assessment with vascular difficulty index for vascular intervention surgery. <i>Medical and Biological Engineering and Computing</i> , <b>2020</b> , 58, 1707-1721	3.1	10
263	Collaboration and Task Planning of Turtle-Inspired Multiple Amphibious Spherical Robots. <i>Micromachines</i> , <b>2020</b> , 11,	3.3	10
262	A system on chip-based real-time tracking system for amphibious spherical robots. <i>International Journal of Advanced Robotic Systems</i> , <b>2017</b> , 14, 172988141771655	1.4	10
261	Characteristics evaluation of the vertical motion of a spherical underwater robot <b>2012</b> ,		10
260	VR-based a novel active rehabilitation system for upper limbs <b>2008</b> ,		10
259	A New Type of Jellyfish-Like Microrobot <b>2007</b> ,		10
258	Coordinative Motion-Based Bilateral Rehabilitation Training System with Exoskeleton and Haptic Devices for Biomedical Application. <i>Micromachines</i> , <b>2018</b> , 10,	3.3	10

257	Design and evaluation of sensorized robot for minimally vascular interventional surgery. <i>Microsystem Technologies</i> , <b>2019</b> , 25, 2759-2766	1.7	10
256	A novel noncontact detection method of surgeon's operation for a master-slave endovascular surgery robot. <i>Medical and Biological Engineering and Computing</i> , <b>2020</b> , 58, 871-885	3.1	9
255	Electrical system design of a spherical underwater robot (SUR-II) <b>2013</b> ,		9
254	Passive and active attitude stabilization method for the spherical underwater robot (SUR-II) <b>2013</b> ,		9
253	Design and characteristic evaluation of a novel amphibious spherical robot. <i>Microsystem Technologies</i> , <b>2017</b> , 23, 1999-2012	1.7	9
252	Bio-inspired robot launching system for a mother-son underwater manipulation task <b>2014</b> ,		9
251	A neural network-based self-tuning PID controller of an autonomous underwater vehicle <b>2012</b> ,		9
250	Development of a Venus flytrap-inspired robotic flytrap <b>2012</b> ,		9
249	Modeling and experiments of IPMC actuators for the position precision of underwater legged microrobots <b>2012</b> ,		9
248	Skating motion analysis of the amphibious quadruped mother robot <b>2013</b> ,		9
247	A novel type of underwater crawling microrobot <b>2005</b> ,		9
246	Development of a Tactile Sensing Robot-Assisted System for Vascular Interventional Surgery. <i>IEEE Sensors Journal</i> , <b>2021</b> , 1-1	4	9
245	A Surgeon's Operating Skills-Based Non-Interference Operation Detection Method for Novel Vascular Interventional Surgery Robot Systems. <i>IEEE Sensors Journal</i> , <b>2020</b> , 20, 3879-3891	4	8
244	Communication between Spherical Underwater Robots based on the acoustic communication methods <b>2016</b> ,		8
243	A marker-based contactless catheter-sensing method to detect surgeons' operations for catheterization training systems. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 76	3.7	8
242	Characteristic evaluation of a magnetic-actuated microrobot in pipe with screw jet motion. <i>Microsystem Technologies</i> , <b>2019</b> , 25, 719-727	1.7	8
241	Feedback force evaluation for a novel robotic catheter navigation system <b>2014</b> ,		8
240	Characteristic evaluation of a wireless capsule microrobotic system <b>2013</b> ,		8

239	Performance evaluation on land of an amphibious spherical mother robot in different terrains <b>2013</b>		8
238	Design of a wireless hybrid in-pipe microrobot with 3 DOFs <b>2011</b> ,		8
237	Development of an underwater biomimetic microrobot with compact structure and flexible locomotion. <i>Microsystem Technologies</i> , <b>2007</b> , 13, 883-890	1.7	8
236	Mechanism and Control of a Novel Type Microrobot for Biomedical Application. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , <b>2007</b> ,		8
235	Design and Control of a Novel Type of Microrobot Moving in Pipe <b>2006</b> ,		8
234	A Fuzzy PID Algorithm for a Novel Miniature Spherical Robots with Three-dimensional Underwater Motion Control. <i>Journal of Bionic Engineering</i> , <b>2020</b> , 17, 959-969	2.7	8
233	High precise haptic device for the robotic catheter navigation system <b>2016</b> ,		8
232	Total Force Analysis and Safety Enhancing for Operating Both Guidewire and Catheter in Endovascular Surgery. <i>IEEE Sensors Journal</i> , <b>2021</b> , 1-1	4	8
231	A tensor-mass method-based vascular model and its performance evaluation for interventional surgery virtual reality simulator. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , <b>2018</b> , 14, e1946	2.9	8
230	A low-power SoC-based moving target detection system for amphibious spherical robots <b>2015</b> ,		7
229	Design and performance evaluation of a master controller for endovascular catheterization. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2016</b> , 11, 119-31	3.9	7
228	Development of Wireless Endoscope with Symmetrical Motion Characteristics. <i>International Journal of Advanced Robotic Systems</i> , <b>2014</b> , 11, 148	1.4	7
227	Design and characteristics evaluation of a novel VR-based robot-assisted catheterization training system with force feedback for vascular interventional surgery. <i>Microsystem Technologies</i> , <b>2017</b> , 23, 3107-3116	1.7	7
226	Development of an Infrared Sensor-based Wireless Intelligent Fish-like Underwater Microrobot <b>2010</b> ,		7
225	A novel PDMS diaphragm micropump based on ICPF actuator <b>2010</b> ,		7
224	Feasibility study for a novel robotic catheter system <b>2011</b> ,		7
223	Dynamic mechanics and electric field analysis of an ICPF actuated fish-like underwater microrobot <b>2011</b> ,		7
222	ULERD-based active training for upper limb rehabilitation <b>2012</b> ,		7



221	A surface EMG signals-based real-time continuous recognition for the upper limb multi-motion <b>2012,</b>		7
220	Recognition of motion of human upper limb using sEMG in real time: Towards bilateral rehabilitation <b>2012,</b>		7
219	Experimental Identification and Active Control of Configuration Dependent Linkage Vibration in a Planar Parallel Robot. <i>IEEE Transactions on Control Systems Technology</i> , <b>2009</b> , 17, 960-969	4.8	7
218	A Novel Small-scale Turtle-inspired Amphibious Spherical Robot <b>2019,</b>		7
217	An intention-based online bilateral training system for upper limb motor rehabilitation. <i>Microsystem Technologies</i> , <b>2021</b> , 27, 211-222	1.7	7
216	A Telepresence System for Therapist-in-the-Loop Training for Elbow Joint Rehabilitation. <i>Applied Sciences (Switzerland)</i> , <b>2019</b> , 9, 1710	2.6	6
215	Electromagnetic braking-based collision protection of a novel catheter manipulator <b>2017,</b>		6
214	Online measuring and evaluation of guidewire inserting resistance for robotic interventional surgery systems. <i>Microsystem Technologies</i> , <b>2018</b> , 24, 3467-3477	1.7	6
213	Underwater performance evaluation of an amphibious spherical mother robot <b>2013,</b>		6
212	IPMC actuator-based a movable robotic venus flytrap <b>2013,</b>		6
211	A multifunctional underwater microrobot for mother-son underwater robot system <b>2013,</b>		6
210	Kalman Filter-based navigation system for the Amphibious Spherical Robot <b>2017,</b>		6
209	Toward cooperation of catheter and guidewire for remote-controlled vascular interventional robot <b>2017,</b>		6
208	A multidimensional information monitoring method for a novel robotic vascular interventional system <b>2015,</b>		6
207	Performance evaluation of the novel grasper for a robotic catheter navigation system <b>2014,</b>		6
206	Controller design for a robotic catheter teleoperation system <b>2012,</b>		6
205	Design of a master-slave rehabilitation system using self-tuning fuzzy PI controller <b>2012,</b>		6
204	A force display method for a novel catheter operating system <b>2010,</b>		6

203	Development and experiments of a novel multifunctional underwater microrobot <b>2010</b> ,		6
202	A novel jellyfish-like biomimetic microrobot <b>2010</b> ,		6
201	Development of a novel robot-assisted catheter system with force feedback <b>2011</b> ,		6
200	A method of decreasing time delay for a tele-surgery system <b>2012</b> ,		6
199	Development of a novel underwater biomimetic microrobot with two motion attitudes <b>2012</b> ,		6
198	A Tripodic Biomimetic Underwater Microrobots Utilizing ICPF Actuators <b>2006</b> ,		6
197	Design and implementation of a novel wireless modular capsule robotic system in pipe. <i>Medical and Biological Engineering and Computing</i> , <b>2020</b> , 58, 2305-2324	3.1	6
196	Design, modeling and control of a miniature bio-inspired amphibious spherical robot. <i>Mechatronics</i> , <b>2021</b> , 77, 102574	3	6
195	. <i>IEEE Sensors Journal</i> , <b>2021</b> , 21, 20807-20816	4	6
194	A novel variable stiffness actuator-based exoskeleton device for home rehabilitation <b>2016</b> ,		5
193	Design and principle analysis for electromagnetic brake clamping mechanism of a novel slave manipulator <b>2016</b> ,		5
192	MR fluid interface of endovascular catheterization based on haptic sensation <b>2016</b> ,		5
191	Transverse microvibrations-based guide wires drag reduction evaluation for endovascular interventional application. <i>Biomedical Microdevices</i> , <b>2018</b> , 20, 69	3.7	5
190	A novel type of catheter sidewall tactile sensor array for vascular interventional surgery <b>2013</b> ,		5
189	Motion characteristic evaluation of a catheter operating system using an optical mouse sensor <b>2013</b> ,		5
188	A LabVIEW-based human-computer interaction system for the exoskeleton hand rehabilitation robot <b>2017</b> ,		5
187	A novel sEMG control-based variable stiffness exoskeleton <b>2017</b> ,		5
186	Force model-based haptic master console design for teleoperated minimally invasive surgery application <b>2015</b> ,		5

185	Study on haptic feedback functions for an interventional surgical robot system <b>2015</b> ,		5
184	Characteristic analysis on land for an amphibious spherical robot <b>2014</b> ,		5
183	A control system of the wireless microrobots in pipe <b>2014</b> ,		5
182	Motion control of an underwater microrobot system in 3-D space <b>2010</b> ,		5
181	Radio communication for the ICPF-based robotic fish <b>2011</b> ,		5
180	Internet based remote control for a robotic catheter manipulating system <b>2012</b> ,		5
179	Development of force sensing systems for a novel robotic catheter system <b>2012</b> ,		5
178	Path-planning optimization of underwater microrobots in 3-D space by PSO Approach <b>2009</b> ,		5
177	A Novel Underwater Crablike Microrobot <b>2006</b> ,		5
176	Design and Experimental Results of A Tripodic Biomimetic Microrobot with 5 DOFs <b>2006</b> ,		5
175	A Multi-Sensor Fusion Self-Localization System of a Miniature Underwater Robot in Structured and GPS-denied Environments. <i>IEEE Sensors Journal</i> , <b>2021</b> , 1-1	4	5
174	Study on the Autonomous Multirobot Collaborative Control System Based on Spherical Amphibious Robots. <i>IEEE Systems Journal</i> , <b>2020</b> , 1-8	4-3	5
173	The communication and stability evaluation of amphibious spherical robots. <i>Microsystem Technologies</i> , <b>2019</b> , 25, 2625-2636	1-7	5
172	Design of the Speech Control System for a Upper Limb Rehabilitation Robot Based on Wavelet De-noising <b>2018</b> ,		5
171	Conceptual design of a novel magnetically actuated hybrid microrobot <b>2017</b> ,		4
170	Haptic feedback in robot-assisted endovascular catheterization <b>2017</b> ,		4
169	Design and performance evaluation of a novel master manipulator for the robot-assist catheter system <b>2016</b> ,		4
168	An adaptive compressive tracking algorithm for amphibious spherical robots <b>2016</b> ,		4

167	Analysis of the elastic stress for the bifurcated region of blood vessel <b>2017</b> ,		4
166	Push force feedback for a kind of robotic catheter navigation system <b>2015</b> ,		4
165	Laser mouse-based master-slave catheter operating system for minimally invasive surgery <b>2015</b> ,		4
164	Soft actuator for hand rehabilitation <b>2015</b> ,		4
163	Characteristics evaluation of a biomimetic microrobot for a Father-son Underwater Intervention Robotic system <b>2015</b> ,		4
162	Development of a symmetrical spiral wireless microrobot in pipe for biomedical applications <b>2014</b> ,		4
161	Study on the comparison of three different upper limb motion recognition methods <b>2014</b> ,		4
160	Internet-based robotic catheter surgery system System design and performance evaluation <b>2012</b> ,		4
159	Finger joint continuous interpretation based on sEMG signals and muscular model <b>2013</b> ,		4
158	A novel master-slave robotic catheter system for Vascular Interventional Surgery <b>2013</b> ,		4
157	A force acquisition method in a catheter navigation system <b>2013</b> ,		4
156	Danger avoiding method based-a novel catheter operating system <b>2010</b> ,		4
155	Characteristics Analysis of a Biomimetic Underwater Walking Microrobot <b>2006</b> ,		4
154	Fish-like underwater microrobot with multi DOF		4
153	Improved Model Predictive-Based Underwater Trajectory Tracking Control for the Biomimetic Spherical Robot under Constraints. <i>Applied Sciences (Switzerland)</i> , <b>2020</b> , 10, 8106	2.6	4
152	Study on motion following with feedback force disturbance in interventional surgical robot system <b>2016</b> ,		4
151	Design and kinematic simulation of a novel exoskeleton rehabilitation hand robot <b>2016</b> ,		4
150	Design, modeling and experimental evaluation of a legged, multi-vectorred water-jet composite driving mechanism for an amphibious spherical robot. <i>Microsystem Technologies</i> , <b>2020</b> , 26, 475-487	1.7	4

149	A Home-Based Bilateral Rehabilitation System With sEMG-based Real-Time Variable Stiffness. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2021</b> , 25, 1529-1541	7.2	4
148	Development of a novel wireless spiral capsule robot with modular structure <b>2017</b> ,		3
147	A hybrid propulsion device for the spherical underwater robot (SUR III) <b>2017</b> ,		3
146	Continuous Estimation of a sEMG-Based Upper Limb Joint <b>2019</b> ,		3
145	Virtual prototyping technology-based dynamics analysis for an amphibious spherical robot <b>2015</b> ,		3
144	Performance evaluation of a magnetic microrobot driven by rotational magnetic field <b>2015</b> ,		3
143	Binocular vision-based underwater ranging methods <b>2017</b> ,		3
142	Quadrotor Vision-based Localization for Amphibious Robots in Amphibious Area <b>2019</b> ,		3
141	Study on Robust Control for the Vascular Interventional Surgical Robot <b>2019</b> ,		3
140	A haptic interface design for a VR-based unskilled doctor training system in Vascular Interventional Surgery <b>2014</b> ,		3
139	Development of a new kind of magnetic field model for wireless microrobots <b>2013</b> ,		3
138	<b>2017</b> ,		3
137	Tensor-mass Model based real-time simulation of vessel deformation and force feedback for the interventional surgery training system <b>2017</b> ,		3
136	Design of Wireless Power Transmission System based on magnetic coupling resonant for the capsule endoscopy <b>2017</b> ,		3
135	Performance evaluation of the wireless micro robot in the fluid <b>2015</b> ,		3
134	Kinematic analysis on land of an amphibious spherical robot system <b>2015</b> ,		3
133	A kinematic modeling of an amphibious spherical robot system <b>2014</b> ,		3
132	Elasticity analysis of Mass-spring model-based virtual reality vascular simulator <b>2014</b> ,		3

131	Development of a novel wireless microrobot in-pipe with hybrid motion <b>2014</b> ,		3
130	Mechanism and control of a spiral type microrobot <b>2010</b> ,		3
129	A novel type of catheter operating system with force monitoring <b>2010</b> ,		3
128	Development of a potential system for upper limb rehabilitation training based on virtual reality <b>2011</b> ,		3
127	Fluid Dynamic Analysis of an ICPF Actuated Fish-like Underwater Microrobot with 3 DOF <b>2011</b> ,		3
126	Design and simulation of a MRAC controller for a human-scale tele-operating system <b>2011</b> ,		3
125	Study on recognition of upper limb motion pattern using surface EMG signals for bilateral rehabilitation <b>2012</b> ,		3
124	A novel type of peristaltic micropump for biomedical applications <b>2008</b> ,		3
123	A Novel Type of Micropump Using Solenoid Actuator for Biomedical Applications. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , <b>2007</b> ,		3
122	A Test-Bed for Visual Servo Control of Artificial Muscle Micro-Robot with Parallel Architecture <b>2006</b> ,		3
121	Infrared Motion Guidance and Obstacle Avoidance of an ICPF Actuated Underwater Microrobot <b>2007</b> ,		3
120	Uncertain moving obstacles avoiding method in 3D arbitrary path planning for a spherical underwater robot. <i>Robotics and Autonomous Systems</i> , <b>2022</b> , 151, 104011	3-5	3
119	ADRC-Based Control Method for the Vascular Intervention Master-Slave Surgical Robotic System.. <i>Micromachines</i> , <b>2021</b> , 12,	3-3	3
118	A Mirror Bilateral Neuro-Rehabilitation Robot System with the sEMG-Based Real-Time Patient Active Participant Assessment.. <i>Life</i> , <b>2021</b> , 11,	3	3
117	Characteristic Analysis of a Magnetically Actuated Capsule Microrobot in Medical Applications. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2021</b> , 1-1	5-2	3
116	A Novel Robot-Assisted Catheter Surgery System with Force Feedback <b>2013</b> , 175-190		3
115	Path Optimization Method for the Spherical Underwater Robot in Unknown Environment. <i>Journal of Bionic Engineering</i> , <b>2020</b> , 17, 944-958	2-7	3
114	A Novel Clamping Mechanism for Circumferential Force Feedback Device of the Vascular Interventional Surgical Robot <b>2020</b> ,		3

113	Kinematic analysis of the catheter used in the robot-assisted catheter operating system for Vascular Interventional Surgery <b>2016</b> ,		3
112	Improvement and Evaluation for the Stability of Mobile Spherical Underwater Robots (SUR III) <b>2019</b> ,		3
111	Platform Design for a Natatores-like Amphibious Robot <b>2018</b> ,		3
110	Design of A Novel Drug-delivery Module for Active Locomotive Intestinal Capsule Endoscopy <b>2018</b> ,		3
109	Design of Intelligent Human-Computer Interaction System for Hard of Hearing and Non-disabled People. <i>IEEE Sensors Journal</i> , <b>2021</b> , 1-1	4	3
108	Task Planning and Collaboration of Jellyfish-inspired Multiple Spherical Underwater Robots. <i>Journal of Bionic Engineering</i> , <b>2022</b> , 19, 643	2.7	3
107	Study on Decentralization of Spherical Amphibious Multi-robot Control System Based on Smart Contract and Blockchain. <i>Journal of Bionic Engineering</i> , <b>2021</b> , 18, 1317-1330	2.7	3
106	A Surgeon's Habits-based Novel Master Manipulator for the Vascular Interventional Surgical Master-Slave Robotic System. <i>IEEE Sensors Journal</i> , <b>2022</b> , 1-1	4	3
105	Study on the Path Planning of the Spherical Mobile Robot based on Fuzzy Control <b>2019</b> ,		2
104	Development of a Grasper for Vascular Interventional Surgery Robotic System <b>2019</b> ,		2
103	Vision locating method based RGB-D camera for amphibious spherical robots <b>2017</b> ,		2
102	Study on a multi-robot cooperative wireless communication control system for the spherical amphibious robot <b>2016</b> ,		2
101	Movement characteristics evaluation of the spherical robot actuated by the magnetic field for medical applications <b>2016</b> ,		2
100	Kinematics analysis of the catheter for a novel VR robotic catheter system <b>2014</b> ,		2
99	The underwater motion simulation of a spherical amphibious robot <b>2014</b> ,		2
98	sEMG signal and hill model based continuous prediction for hand grasping motion <b>2013</b> ,		2
97	An underwater pipeline tracking system for amphibious spherical robots <b>2017</b> ,		2
96	Cable-driven interventional operation robot with Stribeck friction feedforward compensation <b>2017</b> ,		2

95	A novel path planning algorithm for the vascular interventional surgical robotic doctor training system <b>2017</b> ,	2
94	A novel vibrating device for the interventional surgical Robotic System <b>2017</b> ,	2
93	<b>2017</b> ,	2
92	Prediction of interaction force using EMG for characteristic evaluation of touch and push motions <b>2015</b> ,	2
91	<b>2015</b> ,	2
90	OFDM-based micro-signal communication method for the spherical amphibious underwater vehicle <b>2015</b> ,	2
89	Numerical simulation and hydrodynamic analysis of an amphibious spherical robot <b>2015</b> ,	2
88	A roller skating mode-based amphibious spherical robot <b>2014</b> ,	2
87	A haptic catheter operating system using magnetorheological fluids <b>2014</b> ,	2
86	Study on impedance generation using an exoskeleton device for upper-limb rehabilitation <b>2012</b> ,	2
85	Performance evaluation on land of an amphibious spherical mother robot <b>2013</b> ,	2
84	Modeling and position control of IPMC actuators for the underwater biomimetic microrobot <b>2012</b> ,	2
83	Development of a 3D blood vessel model for the simulation of the minimally invasive surgery <b>2012</b> ,	2
82	The development of a new type of compound peristaltic micropump <b>2009</b> ,	2
81	A NOVEL SELF-ASSISTED REHABILITATION SYSTEM FOR THE UPPER LIMBS BASED ON VIRTUAL REALITY. <i>International Journal of Information Acquisition</i> , <b>2006</b> , 03, 247-258	2
80	Development of Pulseless Output Micropump Using Magnet-Solenoid Actuator <b>2007</b> ,	2
79	A Force Sensors-based Catheter Operating System <b>2007</b> ,	2
78	Kinematic Trajectory Analysis of an ICPF Actuated Octopod Underwater Microrobot <b>2007</b> ,	2



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76	Multilevel Operation Strategy of a Vascular Interventional Robot System for Surgical Safety in Teleoperation. <i>IEEE Transactions on Robotics</i> , <b>2022</b> , 1-13	6.5	2
75	A Method for Obtaining Contact Force between Catheter Tip and Vascular Wall in Master-slave Robotic System		2
74	Performance Evaluation of a Magnetically Driven Microrobot for Targeted Drug Delivery. <i>Micromachines</i> , <b>2021</b> , 12,	3.3	2
73	A Magnetorheological Fluids-Based Robot-Assisted Catheter/Guidewire Surgery System for Endovascular Catheterization. <i>Micromachines</i> , <b>2021</b> , 12,	3.3	2
72	A Multi-Functional Module-Based Capsule Robot. <i>IEEE Sensors Journal</i> , <b>2021</b> , 21, 12057-12067	4	2
71	Design and evaluation of quadruped gaits for amphibious spherical robots <b>2016</b> ,		2
70	An improved VR training system for vascular interventional surgery <b>2016</b> ,		2
69	Force feedback-based robotic catheter training system for the vascular interventional surgery <b>2016</b>		2
68	A Method of Evaluating Rehabilitation Stage by sEMG Signals for the Upper Limb Rehabilitation Robot <b>2019</b> ,		2
67	Selective Motion Control of a Novel Magnetic Driven Minirobot with Targeted Drug Sustained-release Function. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2021</b> , 1-1	5.5	2
66	A novel VR-based simulator for the interventional surgical catheter and guidewire cooperation <b>2018</b> ,		2
65	Hydrodynamic Analysis of a Novel Thruster for Amphibious Sphere Robots <b>2018</b> ,		2
64	Structure Improvement and Stability for an Amphibious Spherical Robot <b>2018</b> ,		2
63	Development of a Chair Preventing Low Back Pain with Sitting Person Doing Hand Working at the Same Time <b>2018</b> ,		2
62	Machine Learning-Based Surgical State Perception and Collaborative Control for a Vascular Interventional Robot. <i>IEEE Sensors Journal</i> , <b>2022</b> , 22, 7106-7118	4	2
61	Active Suppression Method of Dangerous Behaviors for Robot-Assisted Vascular Interventional Surgery. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2022</b> , 71, 1-9	5.2	2
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58	Guidewire Tracking based on Visual Algorithm for Endovascular Interventional Robotic System <b>2019</b> ,		1
57	Design and Evaluation of A New Push-type Targeted Drug Delivery Capsule Robot <b>2019</b> ,		1
56	<b>2019</b> ,		1
55	Study on Motion Recognition for a Hand Rehabilitation Robot Based on sEMG Signals <b>2019</b> ,		1
54	Design and Evaluation of a Novel Slave Manipulator for the Vascular Interventional Robotic System <b>2019</b> ,		1
53	Study on Cooperative Control Algorithm of Two Spherical Amphibious Robots <b>2019</b> ,		1
52	Study on Horizontal Path Tracking Control Method for the Spherical Amphibious Robot <b>2019</b> ,		1
51	Study on Collaborative Algorithm for a Spherical Multi-robot System based on Micro-blockchain <b>2019</b> ,		1
50	A Multifunctional Underwater Biomimetic Microrobot. <i>Springer Tracts in Mechanical Engineering</i> , <b>2015</b> , 285-313	0.3	1
49	<b>2015</b> ,		1
48	Hydrodynamic analysis of water-jet thrusters for the spherical underwater robot (SUR III) <b>2017</b> ,		1
47	Dynamic gait analysis of a multi-functional robot with bionic springy legs <b>2016</b> ,		1
46	Characteristics evaluation of a pressure sensitive rubber-based tactile sensor <b>2013</b> ,		1
45	Study on the tracking performance of the vascular interventional surgical robotic system based on the fuzzy-PID controller <b>2017</b> ,		1
44	Design and implementation of self-tuning control method for the underwater spherical robot <b>2017</b> ,		1
43	Performance evaluation of force feedback for the improved vascular interventional robotic system <b>2015</b> ,		1
42	A proximal push force-based force feedback algorithm for robot-assisted vascular intervention surgery <b>2015</b> ,		1

41	Characteristic analysis in water for an amphibious spherical robot <b>2015,</b>	1
40	Construction of 3D vessel model of the VR Robotic Catheter System <b>2012,</b>	1
39	Development of a doctor's finger motion measurement device for a remote catheter operating system <b>2013,</b>	1
38	Performance evaluation of the wireless microrobot in pipe with symmetrical spiral structure <b>2013,</b>	1
37	Modeling of muscle forces around the elbow in the RITS <b>2013,</b>	1
36	Control modeling of a micro-manipulator for human scale tele-operation system <b>2010,</b>	1
35	Development of a catheter operating system for medical applications <b>2010,</b>	1
34	An electromyography-driven central pattern generator model for robotic control application <b>2012,</b>	1
33	Paddling type of microrobot in pipe <b>2009,</b>	1
32	Motion planning of underwater multi-microrobot system <b>2008,</b>	1
31	Development of the novel types of biomimetic microrobots driven by external magnetic field <b>2007,</b>	1
30	Vibration suppression control of flexible arms using sliding mode method	1
29	A Two-channel Haptic Force Interface for Endovascular Robotic Systems <b>2020,</b>	1
28	A Multi-Binocular Camera-based Localization Method for Amphibious Spherical Robots <b>2020,</b>	1
27	Evaluation Performance of the Magnetic Rotational Field for Magnetically Actuated Microrobot System <b>2020,</b>	1
26	Study on Force Feedback Control of the Vascular Interventional Surgical Robot based on Fuzzy PID <b>2020,</b>	1
25	Underwater Obstacle Avoiding Trajectory Tracking Approach for Amphibious Spherical Robots <b>2020,</b>	1
24	Modeling and Experimental Verification of a New Spherical Underwater Robot <b>2020,</b>	1

23	A Novel Fuzzy Neural Network-based Rehabilitation Stage Classifying Method for the Upper Limb Rehabilitation Robotic System <b>2020</b> ,		1
22	Leader-follower cooperative movement method for multiple amphibious spherical robots <b>2016</b> ,		1
21	An EMG-based muscle force evaluation method using approximate entropy <b>2016</b> ,		1
20	A CNNs-based of Force and Torque Identification Model for Vascular Interventional Surgery Robot <b>2019</b> ,		1
19	Radial Basis Function Neural Network-based Control Method for a Upper Limb Rehabilitation Robot <b>2019</b> ,		1
18	Surgeons' Operation Skill-Based Control Strategy and Preliminary Evaluation for a Vascular Interventional Surgical Robot. <i>Journal of Medical and Biological Engineering</i> , <b>2019</b> , 39, 653-664	2.2	1
17	A Novel Bilateral Control Strategy for Master-slave Vascular Interventional Robots <b>2018</b> ,		1
16	Design of a Novel Wearable Power-assist Exoskeleton Device <b>2018</b> ,		1
15	Application of the Hybrid Algorithm in Path Planning of the Spherical Mobile Robot <b>2018</b> ,		1
14	Characteristic Evaluation of a Master-Slave Interventional Surgical Robot Control System <b>2018</b> ,		1
13	Adaptive Clamping Mechanism-based a Novel Slave Manipulator for Endovascular Catheterization <b>2018</b> ,		1
12	Rotary Encoder-based Position Transmission and Feedback of a Novel Robotic Catheter System for Endovascular Catheterization <b>2018</b> ,		1
11	Design of Wireless Mobile Environment Monitoring System Based on Spherical Amphibious Robots <b>2018</b> ,		1
10	Characteristic Evaluation of the Mobile Acoustic Communication for Spherical Underwater Robots (SUR III) <b>2018</b> ,		1
9	A Novel Master-slave Robotic System with Close Loop Control for Vascular Interventional Surgery <b>2018</b> ,		1
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7	Multiple Bio-Inspired Father-Son Underwater Robot for Underwater Target Object Acquisition and Identification.. <i>Micromachines</i> , <b>2021</b> , 13,	3.3	1
6	A Virtual Linkage-based Dual Event-triggered Formation Control Strategy for Multiple Amphibious Spherical Robots in Constrained Space with Limited Communication. <i>IEEE Sensors Journal</i> , <b>2022</b> , 1-1	4	1

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